

## **Assistive Technology Devices for Writing and Spelling**

This document contains information on the range of assistive technology devices that can be used by struggling writers to increase the legibility, complexity, and accuracy of their written products. Many of these devices also support increased efficiency, productivity, and independence. In most instances, students use a combination of assistive technology devices to meet their writing needs. The types of assistive technology devices used to support writing are determined by individual student abilities and needs as well as the required writing tasks across all instructional environments.

In this document, assistive technology devices are organized into various categories based on the primary features or applications of the technology. Moreover, the age ranges for which the devices are appropriate are identified in the following categories: elementary, middle, and high school. Lastly, tools are linked to the various writing skill areas addressed in the Georgia Performance Standards. The skills areas are briefly defined below. It is recommended that individuals utilizing this document refer to the standards to determine the specific skills that are addressed at each grade level.

### **Writing Process**

- Organizational Structure – Ideas are organized due to purpose (cause-effect, chronological) or genre (type of writing: persuasive, narrative, technical).
- Prewriting- Brainstorming- Ideas are generated based on the provided topic. In order to facilitate retention of these ideas, notes, outlines or concept maps may be used.
- Drafting –The ideas generated in the prewriting and brainstorming process are recorded by the student.
- Editing – The student's work is checked for spelling, grammar, and mechanics errors. These errors are corrected.
- Revising – The draft is revised and this revision may include rewording sentences, adding details, and/or adding more content
- Use of Resources – The student uses a variety of resources to obtain facts related to the writing topic. This may include informational resources such as encyclopedias, Internet resources, literary books, or reference books such as dictionaries or thesauruses.

### **Conventions**

- Grammar – Includes subject-verb agreement, sentence structure and complexity, parts of speech, and word usage.
- Mechanics – Includes punctuation (commas, semicolons, end marks), capitalization, and paragraph indentations.
- Spelling –Includes correct spelling of words used in the written product.
- Legibility – Refers to spacing, letter formation, and size. Refers to the readers' ability to read the written product.

The assistive technology devices referenced in this document are included to provide examples of different types of devices used by students with disabilities to accomplish educationally relevant tasks in instructional and access areas. The document does not include all assistive technology devices within a device category and inclusion of a particular device does not constitute endorsement by the Georgia Department of Education. Additional devices may be added to the document by contacting the Georgia Project for Assistive Technology.

Additional information about the assistive technology devices referenced in this document is available on the Georgia Project for Assistive Technology's website at <http://www.gpat.org>. Additional information about the Georgia Performance Standards is available on the Georgia Department of Education's website at <http://doe.k12.ga.us>.

| Device Category                             | Examples   | Age Range  |               |             | Skill Area               |            |          |          |         |                  |                        |           |          |            |   |
|---|--|------------|---------------|-------------|--------------------------|------------|----------|----------|---------|------------------|------------------------|-----------|----------|------------|---|
|   |  | Elementary | Middle School | High School | Writing Process          |            |          |          |         |                  | Conventions of Writing |           |          |            |   |
|   |  |            |               |             | Organizational Structure | Prewriting | Drafting | Revising | Editing | Use of Resources | Grammar                | Mechanics | Spelling | Legibility |   |
| Positioning Aids                            | Slant boards, page holders (Pocket Full of Therapy, Therapy Shoppe)  | X          | X             | X           |                          |            |          |          |         |                  |                        |           |          |            | X |
|   | Dycem, book stands (Sammons Preston Rolyan, Onion Mountain Technology)   | X          | X             | X           |                          |            |          |          |         |                  |                        |           |          |            | X |
|   | Shelf liner/ nonslip mat (discount stores)   | X          | X             | X           |                          |            |          |          |         |                  |                        |           |          |            | X |
|   | Clipboards (office supply stores, discount stores)   | X          | X             | X           |                          |            |          |          |         |                  |                        |           |          |            | X |
|   |  |            |               |             |                          |            |          |          |         |                  |                        |           |          |            |   |
| Contrast Aids                               | Highlighter tape, pens (Crystal Springs Books, office supply)  | X          | X             | X           |                          |            |          |          |         |                  |                        |           |          | X          |   |
|   | EZC Reader / Reading Helper (Really Good Stuff)  | X          | X             | X           |                          |            |          |          |         |                  |                        |           |          | X          |   |
|   | Colored overlays (National Reading Styles Institute, See It Right, Onion Mountain Technology)                  | X          | X             | X           |                          |            |          |          |         |                  |                        |           |          | X          |   |
|   |  |            |               |             |                          |            |          |          |         |                  |                        |           |          |            |   |
| Adapted Writing Utensils                    | Pencils, pens, pencil grips (Onion Mountain Technology, Pocketful of Therapy, Sammons Preston, Beacon Ridge)   | X          | X             | X           |                          |            |          |          |         |                  |                        |           |          |            | X |
|   |  |            |               |             |                          |            |          |          |         |                  |                        |           |          |            |   |
| Adapted Paper / Writing Guides              | Paper: bold & raised lined (Onion Mountain Technology, Sammons Preston, Beacon Ridge, Pocket Full of Therapy ) | X          | X             | X           |                          |            |          |          |         |                  |                        |           |          |            | X |
|   | Dry erase boards (Really Good Stuff)   | X          | X             | X           |                          |            |          |          |         |                  |                        |           |          |            | X |
|   | Writing guides (Independent Living Aids)   | X          | X             | X           |                          |            |          |          |         |                  |                        |           |          |            | X |
|   |  |            |               |             |                          |            |          |          |         |                  |                        |           |          |            |   |
| Personal Vocabulary / Spelling Dictionaries | Notebook (office supply stores, discount stores)   | X          | X             | X           |                          |            |          |          |         |                  |                        |           |          | X          |   |
|   | Quick Word Handbooks (Curriculum Associates)   | X          | X             | X           |                          |            |          |          |         |                  |                        | X         |          | X          |   |

| Device Category                       | Examples   | Age Range  |               |             | Skill Area               |            |          |          |         |                        |         |           |          |            |
|---------------------------------------|--|------------|---------------|-------------|--------------------------|------------|----------|----------|---------|------------------------|---------|-----------|----------|------------|
|                                       |  | Elementary | Middle School | High School | Writing Process          |            |          |          |         | Conventions of Writing |         |           |          |            |
|                                       |  |            |               |             | Organizational Structure | Prewriting | Drafting | Revising | Editing | Use of Resources       | Grammar | Mechanics | Spelling | Legibility |
| Handheld Spellcheckers / Dictionaries | Children's Talking Dictionary & Spell Corrector (Franklin) | X          |               |             |                          |            |          |          |         | X                      | X       |           | X        | X          |
|                                       | Merriam-Webster Speaking Dictionary & Thesaurus (Franklin) | X          | X             | X           |                          |            |          |          |         | X                      | X       |           | X        |            |
|                                       | Speaking Language Master (Franklin)                        | X          | X             | X           |                          |            |          |          |         | X                      | X       | X         | X        |            |
|                                       |  |            |               |             |                          |            |          |          |         |                        |         |           |          |            |
| Recorders                             | Handi-Cassette II (American Printing House for the Blind)  | X          | X             | X           |                          | X          |          |          |         |                        |         |           |          | X          |
|                                       | Digital recorder (office supply store)                     | X          | X             | X           |                          | X          |          |          |         |                        |         |           |          | X          |
|                                       |  |            |               |             |                          |            |          |          |         |                        |         |           |          |            |
| Handheld Scanners                     | Notetaker (Don Johnston)                                   | X          | X             | X           |                          |            |          |          |         |                        |         |           |          | X          |
|                                       | Iris Pen (Onion Mountain Technology)                       | X          | X             | X           |                          |            |          |          |         |                        |         |           |          | X          |
|                                       |  |            |               |             |                          |            |          |          |         |                        |         |           |          |            |
| Interactive Whiteboard                | SmartBoard (Smart Technologies Incorporated)               | X          | X             | X           |                          |            |          |          |         |                        |         |           |          | X          |
|                                       | Mimio (Virtual Ink)  | X          | X             | X           |                          |            |          |          |         |                        |         |           |          | X          |
|                                       |  |            |               |             |                          |            |          |          |         |                        |         |           |          |            |
| Printed Graphic Organizers            | Teacher-made graphic organizers                            | X          | X             | X           | X                        | X          |          |          |         |                        |         |           |          |            |
|                                       | Microsoft Word (Microsoft)                                 | X          | X             | X           | X                        | X          |          |          |         |                        |         |           | X        | X          |
|                                       | Kidspiration (Inspiration)                                 | X          | X             | X           | X                        | X          |          |          |         |                        |         |           | X        | X          |
|                                       | Inspiration (Inspiration)                                  | X          | X             | X           | X                        | X          |          |          |         |                        |         |           | X        | X          |
|                                       |  |            |               |             |                          |            |          |          |         |                        |         |           |          |            |
| Portable Word Processor               | AlphaSmart 3000 (AlphaSmart)                               | X          | X             | X           |                          |            | X        | X        | X       |                        |         |           | X        | X          |
|                                       | Neo (AlphaSmart)   | X          | X             | X           |                          |            | X        | X        | X       |                        |         |           | X        | X          |
|                                       | Dana (AlphaSmart)  | X          | X             | X           |                          |            | X        | X        | X       |                        |         |           | X        | X          |

| Device Category                     | Examples  | Age Range  |               |             | Skill Area               |            |          |          |         |                        |         |           |          |            |
|-------------------------------------|---|------------|---------------|-------------|--------------------------|------------|----------|----------|---------|------------------------|---------|-----------|----------|------------|
|                                     |   | Elementary | Middle School | High School | Writing Process          |            |          |          |         | Conventions of Writing |         |           |          |            |
|                                     |   |            |               |             | Organizational Structure | Prewriting | Drafting | Revising | Editing | Use of Resources       | Grammar | Mechanics | Spelling | Legibility |
| Portable Word Processor (continued) | Personal Digital Assistant – PDA (office supply stores) | X          | X             | X           |                          |            | X        | X        | X       |                        |         |           | X        | X          |
|                                     | Laser PC6 (Perfect Solutions)                           | X          | X             | X           |                          |            | X        | X        | X       |                        |         |           | X        | X          |
|                                     | CalcuScribe (CalcuScribe)                               | X          | X             | X           |                          |            | X        | X        | X       |                        |         |           | X        | X          |
|                                     |   |            |               |             |                          |            |          |          |         |                        |         |           |          |            |
| Concept/Webbing Applications        | Inspiration (Inspiration)                               | X          | X             | X           | X                        | X          |          |          |         |                        |         |           | X        | X          |
|                                     | Kidspiration (Inspiration)                              | X          |               |             | X                        | X          |          |          |         |                        |         |           | X        | X          |
|                                     | Draft:Builder SOLO (Don Johnston)                       | X          | X             | X           | X                        | X          | X        | X        | X       | X                      |         |           | X        | X          |
|                                     |   |            |               |             |                          |            |          |          |         |                        |         |           |          |            |
| Electronic Dictionary Thesaurus     | WordWeb Dictionary Thesaurus (WordWeb Software)         | X          | X             | X           |                          |            | X        | X        | X       | X                      |         |           | X        |            |
|                                     |   |            |               |             |                          |            |          |          |         |                        |         |           |          |            |
| Standard Word Processing Software   | Microsoft Word (Microsoft)                              | X          | X             | X           |                          | X          | X        | X        | X       | X                      | X       | X         | X        | X          |
|                                     | • WordTalk (www.wordtalk.org.uk)                        | X          | X             | X           |                          | X          | X        | X        | X       |                        |         | X         | X        |            |
|                                     | WordPerfect (Corel)                                     | X          | X             | X           |                          | X          | X        | X        | X       | X                      | X       | X         | X        | X          |
|                                     |   |            |               |             |                          |            |          |          |         |                        |         |           |          |            |
| Graphic Word Processing Software    | Writing with Symbols 2000 (Mayer Johnson)               | X          | X             | X           |                          | X          | X        | X        | X       |                        |         |           | X        | X          |
|                                     | Classroom Suite (IntelliTools)                          | X          | X             | X           |                          | X          | X        | X        | X       |                        |         |           | X        | X          |
|                                     | Clicker (Crick)   | X          | X             | X           |                          | X          | X        | X        | X       |                        |         |           | X        | X          |
|                                     | PixWriter (Slater Software)                             | X          | X             | X           |                          | X          | X        | X        | X       |                        |         |           | X        | X          |
|                                     |   |            |               |             |                          |            |          |          |         |                        |         |           |          |            |
| Talking Word Processing Software    | Write:OutLoud SOLO (Don Johnston)                       | X          | X             | X           |                          | X          | X        | X        | X       |                        | X       |           | X        | X          |
|                                     | Classroom Suite (IntelliTools)                          | X          | X             | X           |                          | X          | X        | X        | X       |                        | X       |           | X        | X          |
|                                     | Cast eReader (Don Johnston)                             | X          | X             | X           |                          | X          | X        | X        | X       |                        | X       |           | X        | X          |
|                                     |   |            |               |             |                          |            |          |          |         |                        |         |           |          |            |

| Device Category                              | Examples  | Age Range  |               |             | Skill Area               |            |          |          |         |                        |         |           |          |            |
|--|---|------------|---------------|-------------|--------------------------|------------|----------|----------|---------|------------------------|---------|-----------|----------|------------|
|  |   | Elementary | Middle School | High School | Writing Process          |            |          |          |         | Conventions of Writing |         |           |          |            |
|  |   |            |               |             | Organizational Structure | Prewriting | Drafting | Revising | Editing | Use of Resources       | Grammar | Mechanics | Spelling | Legibility |
| Talking Word Processing Software (continued) | Talking Word Processor (Premier Assistive Technology)       | X          | X             | X           |                          | X          | X        | X        | X       |                        | X       |           | X        | X          |
|  | Tex-Edit Plus (Trans-Tex Software)                          | X          | X             | X           |                          | X          | X        | X        | X       |                        | X       |           | X        | X          |
|  | Writing with Symbols (Mayer Johnson)                        | X          | X             | X           |                          | X          | X        | X        | X       |                        | X       |           | X        | X          |
|  |   |            |               |             |                          |            |          |          |         |                        |         |           |          |            |
| Word Prediction Software                     | Co:Writer 4000 SOLO (Don Johnston)                          | X          | X             | X           |                          |            | X        | X        | X       |                        | X       |           | X        | X          |
|  | Read & Write (TextHelp)                                     | X          | X             | X           |                          |            | X        | X        | X       |                        |         |           | X        | X          |
|  | Aurora Prediction 3.0 for Windows (Aurora Systems)          | X          | X             | X           |                          |            | X        | X        | X       |                        | X       |           | X        | X          |
|  | Word Q2 (Quillsoft)   | X          | X             | X           |                          |            | X        | X        | X       |                        |         |           | X        | X          |
|  | SoothSayer (Applied Human Factor)                           | X          | X             | X           |                          |            | X        | X        | X       |                        |         |           | X        | X          |
|  |   |            |               |             |                          |            |          |          |         |                        |         |           |          |            |
| Electronic Worksheets                        | PaperPort (Nuance Communications)                           | X          | X             | X           |                          |            |          |          |         |                        |         |           |          | X          |
|  | OmniForm (Nuance Communications)                            | X          | X             | X           |                          |            |          |          |         |                        |         |           |          | X          |
|  | TestTalker (Freedom Scientific)                             | X          | X             | X           |                          |            |          |          |         |                        |         |           |          | X          |
|  |   |            |               |             |                          |            |          |          |         |                        |         |           |          |            |
| Advanced Reading and Writing Aid Software    | SOLO (Don Johnston)   | X          | X             | X           | X                        | X          | X        | X        | X       |                        |         |           | X        | X          |
|  | Kurzweil 3000 (Kurzweil Educational Systems)                | X          | X             | X           | X                        | X          | X        | X        | X       | X                      |         |           | X        | X          |
|  | WYNN (Freedom Scientific)                                   | X          | X             | X           |                          | X          | X        | X        | X       | X                      |         |           | X        | X          |
|  | Read & Write Gold (TextHelp)                                | X          | X             | X           |                          | X          | X        | X        | X       |                        |         |           | X        | X          |
|  |   |            |               |             |                          |            |          |          |         |                        |         |           |          |            |
| Voice Recognition Software                   | Microsoft XP Speech Recognition (Microsoft)                 |            | X             | X           |                          |            | X        | X        | X       |                        | X       | X         | X        | X          |
|  | Dragon Naturally Speaking Preferred (Nuance Communications) |            | X             | X           |                          |            | X        | X        | X       |                        | X       | X         | X        | X          |
|  | ViaVoice (Nuance Communications)                            |            | X             | X           |                          |            | X        | X        | X       |                        | X       | X         | X        | X          |